

Session Program

12-17 Jul 2026



**European Conference on Mathematical and Theoretical
Biology (ECMTB 2026)**

Novel Approaches in Mathematical Biology

University of Graz

Monday 13 July

17:00

Novel Approaches in Mathematical Biology

Session | Location: University of Graz, 15.06 - HS

17:00–17:20

Scientific Machine Learning Methods for Extracting ODE Models of EBV-Driven B-Cell Fate Trajectories from scRNA-seq Data

Speaker

Melanie Sadecki

17:20–17:40

Generation of Model-Based Virtual Patient Cohorts Using Neural Networks

Speaker

Kathleen Wilkie

17:40–18:00

Predicting the impact of gene therapy in preventing HIV transmission

Speaker

Steffen Docken

18:00–18:20

3D reaction-diffusion model-based biopsy simulation for dynamic tumor growth parameter estimation

Speaker

Veronika Hoffman

18:20

Tuesday 14 July

15:00

Novel Approaches in Mathematical Biology

Session | Location: University of Graz, 15.05 - HS

15:00–15:20 **Hybrid Mechanistic-Machine Learning Frameworks for Personalized Oncology**

Speaker

Alvaro Köhn-Luque

15:20–15:40

Deciphering antibody repertoire evolution using protein language models and B cell lineage inference

Speaker

Daphne van Ginneken

15:40–16:00

Establishing a Taxonomy of Computational Modeling as the Foundation Towards Certifying Trustworthy Artificial Intelligence

Speaker

Erin Acquesta

16:00–16:20

Exploring the Spatial Dynamics of the Immune Response to Viral Infections

Speaker

Fatemeh (Azade) Beigmohammadi

16:20

17:00

Novel Approaches in Mathematical Biology

Session | Location: University of Graz, 15.05 - HS

17:00–17:20 **Dissecting the Causal Anatomy of “AI Virtual Cells”**

Speaker

Jason Hartford

17:20–17:40

A Hybrid Networked SEIR Model with Generative-AI Driven Agents for Behavioral Heterogeneity in Epidemics

Speaker

Jia Zhao

17:40–18:00

Multivariate drivers of the heterogeneous within-host immune response during influenza

Speaker

Nicole Bruce

18:00–18:20

Equation Learning and Distributional Inference for Modeling Mitochondrial Inheritance in Yeast

Speaker

Kevin Flores

18:20